

**TRANSISTOR HAVING HIGH DIELECTRIC CONSTANT GATE
INSULATING LAYER AND SOURCE AND DRAIN FORMING
SCHOTTKY CONTACT WITH SUBSTRATE**

ABSTRACT OF THE DISCLOSURE

The invention is directed to a device for regulating the flow of electric current with high dielectric constant gate insulating layer and a source and/or drain forming a Schottky contact or Schottky-like region with a substrate and its fabrication method. In one aspect, the gate insulating layer has a dielectric constant greater than the dielectric constant of silicon. In another aspect, the current regulating device may be a MOSFET device, optionally a planar P-type or N-type MOSFET, having any orientation. In another aspect, the source and/or drain may consist partially or fully of a silicide.